

## Worksheet 8 (Fair Division 3): The Method of Sealed Bids

Group Names: \_\_\_\_\_

Jamal, Maggie, and Kendra are dividing an estate consisting of a house, a cabin, and a boat. Their valuations (in thousands) are shown below. We will use the method of sealed bids to determine the final allocation.

Their sealed bids are shown below. To determine the total allocation, fill in the various rows of the table given below.

|     |   | Jamal  | Maggie  | Kendra  |
|-----|---|--|---|---|
|     | House                                     | \$250  | \$280   | \$300   |
|     | Cabin                                     | \$170  | \$200   | \$255   |
|     | Boat                                      | \$60   | \$30  | \$45  |
| 2a) | Total bid                                 | 480  | 510   | 600   |
| 2b) | Fair Share                                | $\frac{480}{3} = \$160$                          | $\frac{510}{3} = \$170$                       | $\frac{600}{3} = \$200$   |
| 3a) | Winning Bid(s) / who                      | boat   | no items                                      | house and cabin   |
| 3b) | total value of won items                  | \$60   | \$0   | \$555   |
| 4)  | (award)-(fair share)<br><br>owes/recieves | $60 - 160 = -100$<br>receives \$100 from holding | $0 - 170 = -170$<br>receives 170 from holding | $555 - 200 = 355$<br>owes \$355 to holding                            |
| 5a) | total surplus                             | 85   | 85  | 85  |
| 5b) | share of surplus                          | $85/3 = 28.33$                                   | 28.33   | 28.33   |
| 8   | Final allocation                          | boat + \$128.33<br><br>Fair? \$188.33 > 160 ✓    | \$198.33<br><br>198.33 > 170 ✓                | house, cabin and pays \$326.67<br><br>$555 - 326.67 = 228.33 > 200$ ✓ |

holding

|               |
|---------------|
| +355 (from K) |
| -100 (to J)   |
| -170 (to M)   |
| <hr/>         |
| 85            |

← surplus